<110> Bougueleret, Lydie

Chumakov, Ilya

<120> Nucleic Acids and Vectors Encoding Human Defensin Polypeptide and Applications Thereof

<130> GEN-100D1

<140> US 10/045,180

<141> 2001-10-18

<150> US 09/486,580

<151> 2000-02-25

<150> PCT/FR98/01864

<151> 1998-08-28

<150> FR 97/10823

<151> 1997-08-29

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<170> PatentIn version 3.1

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Thr Leu Thr Leu Leu Ser Ala Phe Leu Leu Val Ala Leu Gln Ala Trp
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Ala Glu Pro Leu Gln Ala Arg Ala His Glu Met Pro Ala Gln Lys Gln
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Pro Pro Ala Asp Asp Gln Asp Val Val Ile Tyr Phe Ser Gly Asp Asp
35   40   45   50

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Ser Cys Ser Leu Gln Val Pro Gly Ser Thr Lys Gly Leu Ile Cys His
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Cys Arg Val Leu Tyr Cys Ile Phe Gly Glu His Leu Gly Gly Thr Cys
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Phe Ile Leu Gly Glu Arg Tyr Pro Ile Cys Cys Tyr
            85   90

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Lys Gln Pro Pro Ala Asp Asp Gln Asp Val Val Ile Tyr Phe Ser Gly
        35                  40                  45

Asp Asp Ser Cys Ser Leu Gln Val Pro Gly Ser Thr Lys Gly Leu Ile
    50                  55                  60

Cys His Cys Arg Val Leu Tyr Cys Ile Phe Gly Glu His Leu Gly Gly
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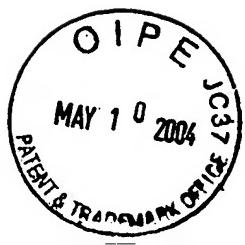

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gcattgctct gtgtatttat tcctattgac taaggttgtt tgtgctaccg gcactaatgc     3840

agccagcatc accggtcagc cagcatgtgc attctccaag attcccttta ccacccaccg     3900

ctgaccttgg tgcttaattt ctcagtcttc ctctgtgttc ccaggctcaa caaggggcat     3960
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ggtctgctct tgcagattag tattctgccg gcgaacagaa cttcgtgttg ggaactgcct   4020

cattggtggt gtgagtttca catactgctg cacgcgtgtc gattaacatt ctgctgtcca   4080

agagaatgtc atgctgggaa cgccatcatc ggtggtgtta gcttcacatg cttctgcagc   4140

tgagcttgca gaatagagaa aaatgagctc ataatttgct ttgagagcta caggaaatgg   4200

ttgtttctcc tatactttgt ccttaacatc tttcttgatc ctaaatatat atctcgtaac   4260

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<212> DNA

<213> Homo sapiens

<220>

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<223> Def-4 (HNP-4) coding sequence

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                                                          Met Arg
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att atc gcc ctc ctc gct gct att ctc ttg gta gcc ctc cag gtc cgg   105
Ile Ile Ala Leu Leu Ala Ala Ile Leu Leu Val Ala Leu Gln Val Arg
         5   10   15

gca ggc cca ctc cag gca aga ggt gat gag gct cca ggc cag gag cag   153
Ala Gly Pro Leu Gln Ala Arg Gly Asp Glu Ala Pro Gly Gln Glu Gln
     20   25   30

cgt ggg cca gaa gac cag gac ata tct att tcc ttt gca tgg gat aaa   201
Arg Gly Pro Glu Asp Gln Asp Ile Ser Ile Ser Phe Ala Trp Asp Lys
35   40   45   50

agc tct gct ctt cag gtt tca ggc tca aca agg ggc atg gtc tgc tct   249
Ser Ser Ala Leu Gln Val Ser Gly Ser Thr Arg Gly Met Val Cys Ser
                    55   60   65

tgc aga tta gta ttc tgc cgg cga aca gaa ctt cgt gtt ggg aac tgc   297
Cys Arg Leu Val Phe Cys Arg Arg Thr Glu Leu Arg Val Gly Asn Cys
                70   75   80

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ctc att ggt ggt gtg agt ttc aca tac tgc tgc acg cgt gtc gat taa      345
Leu Ile Gly Gly Val Ser Phe Thr Tyr Cys Cys Thr Arg Val Asp
        85                      90                  95

cgttctgctg tccaagagaa tgtcatgctg ggaacgccat catcggtggt gttagcttca      405

catgcttctg cagctgagct tgcagaatag agaaaaatga gctcataatt tgctttgaga      465

gctacaggaa atggttgttt ctcctatact ttgtccttaa catctttctt gatcctaaat      525

atatatctcg taacaag                                                    542
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<212> PRT

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<221> MISC_FEATURE

<222> (1)..(97)

<223> Def-4 preproprotein sequence

<220>

<221> SIGNAL

<222> (1)..(19)

<223> Def-4 signal peptide

<220>

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<222> (20)..(63)

<223> Def-4 propeptide

<220>

<221> PEPTIDE

<222> (64)..(97)

<223>   Def-4 mature peptide

<400>   9

Met Arg Ile Ile Ala Leu Leu Ala Ala Ile Leu Leu Val Ala Leu Gln
1   5   10   15

Val Arg Ala Gly Pro Leu Gln Ala Arg Gly Asp Glu Ala Pro Gly Gln
            20   25   30

Glu Gln Arg Gly Pro Glu Asp Gln Asp Ile Ser Ile Ser Phe Ala Trp
        35   40   45

Asp Lys Ser Ser Ala Leu Gln Val Ser Gly Ser Thr Arg Gly Met Val
    50   55   60

Cys Ser Cys Arg Leu Val Phe Cys Arg Arg Thr Glu Leu Arg Val Gly
65   70   75   80

Asn Cys Leu Ile Gly Gly Val Ser Phe Thr Tyr Cys Cys Thr Arg Val
                85   90   95

Asp

<210>   10

<211>   94

<212>   PRT

<213>   Homo sapiens

<220>

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<222>   (1)..(94)

<223>   Def-5 preproprotein sequence

<220>

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GEN-100D1

<222>   (1)..(19)

<223>   Def-5 signal peptide

<220>

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<222>   (20)..(63)

<223>   Def-5 propeptide

<220>

<221>   PEPTIDE

<222>   (64)..(94)

<223>   Def-5 mature peptide

<400>   10

Met Arg Thr Ile Ala Ile Leu Ala Ala Ile Leu Leu Val Ala Leu Gln
1   5   10   15

Ala Gln Ala Glu Ser Leu Gln Glu Arg Ala Asp Glu Ala Thr Thr Gln
            20   25   30

Lys Gln Ser Gly Glu Asp Asn Gln Asp Leu Ala Ile Ser Phe Ala Gly
            35   40   45

Asn Gly Leu Ser Ala Leu Arg Thr Ser Gly Ser Gln Ala Arg Ala Thr
    50   55   60

Cys Tyr Cys Arg Thr Gly Arg Cys Ala Thr Arg Glu Ser Leu Ser Gly
65   70   75   80

Val Cys Glu Ile Ser Gly Arg Leu Tyr Arg Leu Cys Cys Arg
                85   90

<210>   11

<211>   100

<212>   PRT

GEN-100D1

<213>   Homo sapiens

<220>

<221>   MISC_FEATURE

<222>   (1)..(100)

<223>   Def-6 preproprotein sequence

<220>

<221>   SIGNAL

<222>   (1)..(19)

<223>   Def-6 signal peptide

<220>

<221>   PROPEP

<222>   (20)..(70)

<223>   Def-6 propeptide

<220>

<221>   PEPTIDE

<222>   (71)..(100)

<223>   Def-6 mature peptide

<400>   11

Met Arg Thr Leu Thr Ile Leu Thr Ala Val Leu Leu Val Ala Leu Gln
1   5   10   15

Ala Lys Ala Glu Pro Leu Gln Ala Glu Asp Asp Pro Leu Gln Ala Lys
            20   25   30

Ala Tyr Glu Ala Asp Ala Gln Glu Gln Arg Gly Ala Asn Asp Gln Asp
            35   40   45

Phe Ala Val Ser Phe Ala Glu Asp Ala Ser Ser Ser Leu Arg Ala Leu
   50   55   60

Gly Ser Thr Arg Ala Phe Thr Cys His Cys Arg Arg Ser Cys Tyr Ser
65   70   75   80

Thr Glu Tyr Ser Tyr Gly Thr Cys Thr Val Met Gly Ile Asn His Arg
           85   90   95

Phe Cys Cys Leu
        100

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<211> 94

<212> PRT

<213> Homo sapiens

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<223> Def-1 preproprotein sequence

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<222> (20)..(64)

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<222> (65)..(94)

<223> Def-1 mature peptide

<400> 12

Met Arg Thr Leu Ala Ile Leu Ala Ala Ile Leu Leu Val Ala Leu Gln
1   5   10   15

Ala Gln Ala Glu Pro Leu Gln Ala Arg Ala Asp Glu Val Ala Ala Ala
            20   25   30

Pro Glu Gln Ile Ala Ala Asp Ile Pro Glu Val Val Val Ser Leu Ala
        35   40   45

Trp Asp Glu Ser Leu Ala Pro Lys His Pro Gly Ser Arg Lys Asn Met
    50   55   60

Ala Cys Tyr Cys Arg Ile Pro Ala Cys Ile Ala Gly Glu Arg Arg Tyr
65   70   75   80

Gly Thr Cys Ile Tyr Gln Gly Arg Leu Trp Ala Phe Cys Cys
            85   90

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<400> 13
tgtaaaacga cggccagt   18

<210> 14
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<212> DNA
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<220>
<223> Oligonucleotide RP

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caggaaacag ctatgacc   18